REMARKS

This amendment and remarks are filed in response to the Office Action dated September 12, 2003 wherein claims 1-26, 28-33, 35 and 37 are rejected and claims 27, 34 and 36 are withdrawn from prosecution.

Election/Restrictions

Examiner argues that this application contains claims directed to more than one species of the generic invention. These species are deemed to lack unity of invention because they are not so linked as to form a single general inventive concept under PCT Rule 13.1.

The species are as follows:

Species 1: spray vial, spray pump, atomizer, nebulizer, aerosolizer, and dry powder inhaler.

Species 2, humidifier

Species 3: mask

Species 4: nasal drops

Species 5: lozenges

Applicant is required, in reply to this action, to elect a single species to which the claims shall be restricted if no generic claim is finally held to be allowable. The reply must also identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which claims are readable upon the elected species.

MPEP §§ 809.02(a).

During a telephone conversation with Hana Verny on September 10, 2003 a provisional election was made with traverse to prosecute species 1. Affirmation of this election must be made by applicant in replying to this Office action. Claims 27, 34, and 36 withdrawn from drawn to a non-elected invention.

Applicant affirm election of species 1 with traverse. The traverse is based on the fact that all these claims were previously examined without restriction requirement and therefore, the unity of invention was clearly not in question. The prior Examiner judged all claims to be directed to one invention. No restriction requirement was issued.

Applicant respectfully point out that Request for Continuing Examination (RCE) is a continuing examination and not a new examination and consequently all claims pending in the application before the Request for Continuing Examination is filed should be examined. Applicant respectfully request that Examiner withdraw the restriction requirement and examines all claims as originally filed and amended on June 25, 2003.

Specification

The amendment filed June 25,2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The applicant has amended the specification to read sodium bicarbonate. However, applicant's original specification reads sodium hydrogen; thus applicant does not have support for this amendment.

Applicant is required to cancel the new matter unless support can be provided, in the reply to this Office Action.

Applicant respectfully disagree that the amendment should

have introduced new matter. However, to expedite the prosecution of the application, Applicant hereby cancels new matter previously introduced to page 21, line 15.

Examiner is respectfully requested to cancel the prior amendment. The cancellation will not in any way affect the subject matter of the application as the term "sodium bicarbonate" is sufficiently described and used in the application for example on page 21, line 11, page 32, lines 4 and 10, page 33, line 13 and page 60, lines 5-7 and cannot constitute a new matter.

Since the prior amendment is hereby canceled, Applicant requests Examiner to withdraw this objection to the specification as being moot.

Rejections under 35 USC §§ 112, First Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Examiner rejects claims 1-26, 28-33, 35, 37 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for treating snoring, sleep apnea or sudden infant death syndrome, does not reasonably provide enablement for preventing snoring, sleep apnea or sudden infant death syndrome. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims.

Enablement is considered in view of the Wands factors (MPEP 2164.01 (a)). These include: nature of the invention, breadth of the claims, state of the art, guidance of the specification, predictability of the art, and the working examples. All the factors have been considered with regard to the claim, with the most relevant factors discussed below.

Nature of the Invention: The claim is drawn to a method of treating or preventing snoring, sleep apnea or sudden infant death syndrome. The nature of the invention is complex in that it encompasses the prevention of snoring or sleep apnea with the instant compound such that an individual never has the instant respiratory disorder.

Breadth of Claims: The complex nature of the claim is greatly exacerbated by the breadth of the claim. The claim encompasses the prevention of snoring, sleep apnea, and SIDS and the actual cause of the disorders are due to several factors, i.e. age, sex, obesity, upper airway structural abnormalities, etc. This may or may not be addressed by the administration of the composition.

State of the Art: While the state of the art recognizes alleviation of the disorders with the use of synthetic surfactants, the connection between the actual cause of the disorder and the prevention of the disorder itself has not been established. The state of the art recognizes the treatment of the symptoms of the disorder may be through the administration of alkylaryl polyether alcohol. For instance, the actual cause of SIDS in the art is not known, many possible theories exist in the art.

Guidance of the Specification: The guidance given by the specification as to how one would administer the claimed composition in order to actually prevent the disease is minimal. All the guidance provided by the specification is directed

towards the treatment rather than the prevention of snoring, sleep apnea, and SIDS. For instance, the actual prevention of snoring is not demonstrated, rather the treatment is with continued administration of the instant compound, snoring is treated. However, the actual cause and cure of the snoring is not addressed.

Predictability of the Art: The lack of significant guidance from the specification or prior art with regard to the actual prevention of the disorders in a human subject with the administration of the instant composition makes practicing the claimed invention unpredictable in terms of the prevention of the disorder.

Working Examples: All the working examples provided by the specification are directed toward the treatment rather than the prevention of the disorder.

For the stated reasons above, the rejection based on enablement is deemed proper.

Applicant disagree. Applicant respectfully submit that the treatment and prevention, particularly that of snoring, is one and the same. If one treats snoring one also prevents it from happening. However, in order to advance the examination, Applicants hereby amended claims to cancel "prevention" from the claims. This amendment overcomes Examiner's rejections under 35 USC 112, first paragraph. The rejection should be withdrawn.

Claim Objections

Claim 37 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 37 depends from independent claim 30, which recites consisting claim language. Therefore, the use of instant claim

language closes the claims to recited ingredients, Le. alkyl aryl polyether alcohol and pharmaceutically acceptable excipients, additive, or diluents.

Applicant disagrees. However, to meet Examiner's rejections, Applicant canceled claim 37 thereby obviating claims objection.

Rejections under 35 USC 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 9-12, 14-15, 17-18, 21-23, 25-26, 30-33, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Kennedy et al (5,849,263).

Kennedy et al disclose a pharmaceutical composition containing 0.25%-5% tyloxapol and a carrier medium (distilled water/saline) for the treatment of respiratory diseases and distress. See column 7, lines 43-45 and column 11, lines 19-21. Kennedy discloses the Alevaire formulation containing 0.125% tyloxapol, 2% NaHCO3, and 5% glycerol. See example 6. For administration of nasal airway for relief of nasal rhinitis or rhinosinusitis, the tyloxapol is administered in the form of a fine spray from a squeeze bottle. See column 12, lines 1-10. Kennedy discloses a jet aerosol nebulizer system. See column 11, lines. Kennedy discloses an anti-inflammatory drug included in the formulation. See column 11, lines 30-52. The reference discloses a tyloxapol formulation for asthma. See column 19, lines 25-30.

Note that the intended use of a composition or device does not hold patentable weight.

Applicants disagree. Examiner is mixing method of treatment claims with the device and composition claims. Anticipation rejection can only be made if the claimed subject was **"previously patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application".** Applicants respectfully submit that there are no known references (patents or publications) disclosing a use of tyloxapol composition, as claimed, for treatment of snoring, sleep apnea, sudden infant death syndrome (SIDS) or improvement of nasal breathing.

Applicants respectfully submit that the prior claims 1-24 were directed to the method for treatment of snoring, sleep apnea, SIDS and improvement of nasal breathing, not to treatment of pulmonary inflammation or asthma. The current newly amended claims 1-23 are even more specifically directed to a method for treatment of the claimed conditions as they are separated into four groups of claims specifically directed to snoring (claims 1-8), sleep apnea (claims 9-12), SIDS (claims 13-16) and improvement of breathing in humans and animals (claims 18-23). The current method has nothing to do with the inflammation of the respiratory tract or with asthma or rhinitis.

Kennedy's reference describes and concerns pharmaceutical compositions for treatment of respiratory inflammation. The respiratory inflammation, as Examiner will surely admit, is a deep lung (lower respiratory tract) disease which is not in any way connected with snoring, SIDS, sleep apnea or with improvement of nasal breathing which are all upper respiratory diseases of pharynxlarynx area. The currently claimed diseases are not inflammatory diseases and are not treated with the

composition of Kennedy. Kennedy specifically discloses that the amount of tyloxapol in the composition is from about 0.125% to about 5% (Col.8, l. 24-28), there is no $NaHCO_3$ or active phospholipids (Col.8, l. 33-35). The reference to Example 6 of Kennedy which Examiner is citing as being anticipatory is actually the formulation ALEVAIRE which was developed by Miller as vehicle for delivery of streptomycin to children with tuberculosis (Col. 19, l. 54-62). If the Examiner will read on at Col. 20, lines 11-67 and Col. 21, lines 1-12, Examiner will find out that the ALEVAIRE formulation caused bronchospasm because the presence of $NaHCO_3$ and glycerol in the ALEVAIRE increases hypertonicity of the formulation (see particularly Col. 20, lines 60-65) to a physiologically unacceptable level where the severe bronchospasm occurs. Examiner will also note that the amounts of tyloxapol in ALEVAIRE is much lesser than the amounts of tyloxapol present in the claimed composition for treatment of snoring, sleep apnea, SIDS or for improvement of breathing.

Claims 1-23 are amended to contain the appropriate amounts of tyloxapol for treatment of each of the above listed conditions. Claims 25-29 are similarly amended to include a language "consisting of" a specific amount of tyloxapol in combination with glycerol and sodium bicarbonate. Composition claims 30-37 are canceled.

Claims are not anticipated by Kennedy as they are all directed to methods for treatment of different conditions using different compositions.

Rejections under 35 USC 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is

not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 1 03(a) are summarized as follows:

Determining the scope and contents of the prior art.

Ascertaining the differences between the prior art and the claims at issue. Resolving the level of ordinary skill in the pertinent art.

Considering objective evidence present in the application indicating obviousness or nonobviousness.

Rejections of Claims 8, 19, 20 and 24 under 35 U.S.C. 103

Examiner rejects claims 8, 19-20, and 24 under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al (5,849,263). Examiner argues that Kennedy et al disclose a pharmaceutical composition containing 0.25%-5% tyloxapol and a carrier medium (distilled water/saline) for the treatment of respiratory diseases and distress. See column 7, lines 43-45 and column 11, lines 19-21. Kennedy discloses the Alevaire formulation containing 0.125% tyloxapol, 2% NaHCO3, and 5% glycerol. See example 6. The reference teaches the composition for asthma. See column 19, lines 25-30.

Examiner admits that Kennedy et al do not specify the instant amount and Kennedy does not specify the type of physical activity.

However, Examiner deems it obvious to one of ordinary skill

in the art at the time the invention was made to manipulate the concentration of the prior art's formulation through routine experimentation. Differences in concentrations do not impart patentability for subject matter encompassed by the prior art unless an indication of criticality is shown. One would be motivated to do so since Kennedy provides the general parameters of the formulation and manipulation is based on the desired pH, isotonicity, etc.

Examiner also deems it obvious to one of ordinary skill in the art at the time the invention was made to treat nasal breathing due to physical activity. One would be motivated to do so since Kennedy teaches the treatment of nasal breathing, i.e. asthma or rhinitis.

Therefore, Examiner argues one would expect similar results in improving breathing due to another cause. The source per se of problems with nasal breathing does not impart patentable distinction unless it imputes a different characteristic from that known in the art.

Applicants disagree.

Examiner rejects claims 8, 19-20, and 24 as being unpatentable over Kennedy reference. Examiner maintains that Kennedy discloses a pharmaceutical composition containing 0.25%-5% tyloxapol and a carrier medium (distilled water/saline) for the treatment of respiratory diseases and distress, column 7, lines 43-45 and column 11, lines 19-21, and further that Kennedy discloses the ALEVAIRE formulation containing 0.125% tyloxapol, 2% NaHCO3, and 5% glycerol in example 6. Examiner further argues that the reference teaches the composition for asthma. See column 19, lines 25-30. Examiner admits that Kennedy does not specify the instant amount or the type of physical activity.

Examiner deems it obvious to one of ordinary skill in the art at the time the invention was made to manipulate the

concentration of the prior art's formulation through routine experimentation and further argues that differences in concentrations do not impart patentability for subject matter encompassed by the prior art unless an indication of criticality is shown which one would be motivated to do so since Kennedy provides the general parameters of the formulation and manipulation is based on the desired pH, isotonicity, etc.

Applicants disagree. Applicant respectfully points out that not only is Kennedy formulation not making the current invention obvious but it, in fact, points away from it. First, the applicants composition is intended for a different purpose and for treatment of different diseases and conditions not disclosed by Kennedy or intended or contemplated by Kennedy, and consequently, the current compositions, methods of administration and conditions for such administration are all different than Kennedy's formulation.

Kennedy's formulation is intended for treatment of respiratory inflammatory diseases (Col. 1, lines 19 and 20) wherein the Kennedy's formulation allows for an aggressive and efficient treatment of these diseases with excellent distribution within the lung where this was not possible with prior formulations (Col. 8, lines 48-51) as the Kennedy's formulation has reduced hypertonicity and does not contain $NaHCO_3$ or active phospholipids used in prior formulations (Col. 8, lines 33-42) where these components caused bronchospasm. Since the Kennedy's formulation is intended for treatment of lung inflammatory disease, it has to be delivered into the lung and when there is bronchospasm, such delivery is not possible. Consequently, Kennedy's formulation is intentionally void of $NaHCO_3$ and glycerol, two agent which are responsible for bronchospasm and airways obstruction caused by ALEVAIRE (Col. 20, lines 21 and 22, and lines 35-37. Additionally, since the

Kennedy's formulation is intended for treatment of lung inflammation it must be delivered in the aerosol or nebulizer providing a particle sizes which get into the lungs. Such particle sizes must be 5 microns or smaller.

The current composition is specifically developed for and used for treatment of snoring, sleep apnea, SIDS or for improved breathing during physical activity and, therefore, it contains higher amounts of tyloxapol than ALEVAIRE and EXOSURF and either sodium bicarbonate or sodium hydrogen and glycerol, that is components which are not used by Kennedy because they have been shown to cause bronchospasm, and has the particle sizes intentionally larger then 5 microns as they are not intended to be delivered into the airways but only to the nasopharyngeal cavity. The spray or aerosol particles of sizes between 5 and 100 microns deliver and deposit the current formulation into pharynx and to the upper airways but do not deposit the formulation which contains $NaHCO_3$ and glycerol into lungs where it would cause bronchospasm.

Compared to the current formulation, Kennedy's formulation is developed and intended for deep lung deposition and for treatment of inflammatory lung diseases. To avoid bronchospasm, Kennedy developed the formulation without $NaHCO_3$ and glycerol as these two agents would defeat his intent.

With knowledge of these factors, person skilled in the art would not use the current formulation for treatment of snoring, sleep apnea, SIDS or for improved breathing as they would know that $NaHCO_3$ and glycerol cause bronchospasm and such person would also know that that was a reason why Kennedy avoided both in his formulation. The person skilled in the art would not have a reason to believe that the formulation which clearly had serious pathophysiological consequences when administered into the lungs would be suitable for treatment of snoring, sleep apnea or SIDS.

Without clinical studies and experimentation performed by applicants, the use of the current formulation containing higher amounts of tyloxapol than ALEVAIRE but otherwise the same components $NaHCO_3$ and glycerol of which presence in the ALEVAIRE formulation was shown to be undesirable, would not have been obvious as everything contained in the current formulation points away from using it. Examiner is using a hindsight to find obviousness where there is none.

Kennedy's formulation is intended to improve the prior formulation ALEVAIRE for treatment of respiratory inflammations and respiratory distress. The ALEVAIRE formulation, due to its composition, was causing severe bronchospasm when administered to patients. Examiner will note that the ALEVAIRE composition was used for treatment of asthma. Examiner will know or should know that asthma is a pulmonary disease characterized by reversible airway obstruction and airway bronchoconstriction. To treat asthma, the particle sizes of the aerosol must be small enough, in fact smaller then 5 microns, to get to the lower lungs, otherwise the treatment of bronchoconstriction would not be effective. The Kennedy's disclosure that the formulation intended to treat asthma bronchoconstriction in fact caused bronchospasm is by itself sufficient indication that the use of the current composition would not be obvious from that fact.

Instant composition contains basically the same components as ALEVAIRE, however, because it is intended for different purposes and not for treatment of respiratory tract and lungs, it purposely contains higher concentrations (from at least 1.6 times to 160 times) of tyloxapol as those used in ALEVAIRE and has different properties from the ALEVAIRE. ALEVAIRE admittedly results in a severe bronchospasm in tuberculosis patients, bronchoconstriction in asthmatic patients and increased airway obstruction in the patients with chronic obstructive pulmonary

disease (Kennedy, Example 6). The calculated osmolarity of the ALEVAIRE solution is 1.019 mOsm, not dissimilar to the hypertonic solution causing bronchoconstriction in normal healthy individual. Since the ALEVAIRE and other hypertonic composition cause bronchospasm and other side effects, no person skilled in the art would be imprudent enough to consider, under these circumstance, to develop the composition which would contain much higher proportions of the same components which cause such severe consequences, for any purpose which would be connected with the respiratory tract. No one can expect that by increasing the amount of tyloxapol and by using the same components shown to result in bronchospasm the side effects would improve. It was the reason why Kennedy developed his improved less hypertonic composition which contained more tyloxapol, between 0.125 to 5%, but no sodium bicarbonate ($NaHCO_3$) and only very small amount (0.1%) or no glycerol. Kennedy just utilizes from 0.125 to about 5% tyloxapol dissolved in saline or distilled water.

Contrary to both compositions discussed above, the current composition is specifically directed and was proven to be effective for treatment of snoring, sleep apnea, SIDS and for increase in nasal breathing. The composition is formulated such that it is delivered in an aerosol, including the nasal spray, or a powder having a particle sizes larger then 5 micron, specifically the sizes between 5 and 100 microns. The reason for this is that, in order to be effective, the formulation must be delivered in efficacious amount to the throat of the treated individual without any significant amount getting into the lower respiratory tract. The particle size of the aerosol, as discussed in Kennedy, is very important aspect for the efficacy of the delivery of the composition into the lower lungs for treatment of respiratory infections, inflammations, parasites,

etc.

In column 10, lines 63-67, Kennedy discusses the administration of the composition to the lung either by direct instillation or by aerosolization using a nebulizer that produces respirable particles of less than 5 microns mass median diameter.

Claims have now been amended to include above the 5 micron particle sizes limitation as well as the amount of tyloxapol above about 2 mg, with exception of the formulation suitable for treatment of SIDS.

Examiner further argues that it is deemed obvious to one of ordinary skill in the art at the time the invention was made to treat nasal breathing due to physical activity as one would be motivated to do so since Kennedy teaches the treatment of nasal breathing, i.e. asthma or rhinitis.

Therefore, Examiner maintains, one would expect similar results in improving breathing due to another cause. The source per se of problems with nasal breathing does not impart patentable distinction unless it imputes a different characteristic from that known in the art.

Applicant disagrees. Examiner is imputing teachings to Kennedy which teachings are not there. As already discussed above, Kennedy describes different composition intended for different purpose. The current composition would not work for Kennedy as it would never get to a site where the inflammation is present, namely into the lower lung for treatment of asthma because it would by necessity cause even larger bronchospasm in airways of already obstructed and inflamed airways. Administration of applicant's composition could rapidly result in a death of the subject as the asthmatic patients have hyperreactive, i.e. hyperresponsive, airways with manifestly exaggerated bronchoconstriction response to smallest stimuli

(The Merck Manual, 17th Edition, pp. 556-557).

Examiner wrongfully characterizes Kennedy's reference as the treatment of nasal breathing, i.e. asthma, or rhinitis. Asthma has been defined above. Rhinitis, according to the Merck Index, is edema and vasodilation of the nasal mucous membrane, nasal discharge and obstruction, typically caused by streptococcal, staphylococcal or pneumococcal infections generally accompanied by inflammation. Treatment suggested by the Merck Index includes identification of the underlaying organism and selection of antibiotics, anti-inflammatories or sympathomimetic amines. Thus, rhinitis cannot be treated by solely providing a composition which would improve breathing.

Applicants respectfully submit that their composition is different from the composition of Kennedy and is useful for different purpose and not for treatment of rhinitis, rhinosinusitis and such. The rejection should be withdrawn. It is so respectfully requested.

Rejections of Claims 13, 16, 28-29 and 35 under 35 USC 103

Examiner further rejects claims 13 and 16, 28-29, and 35 under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al (5,849,263) by itself or in view of Meyer et l (5,958,902).

Examiner argues that Kennedy et al disclose a pharmaceutical composition containing 0.25%-5% tyloxapol and a carrier medium (distilled water/saline) for the treatment of respiratory diseases and distress. See column 7, lines 43-45 and column 11, lines 19-21. Kennedy discloses the ALEVAIRE formulation containing 0.125% tyloxapol, 2% NaHCO3, and 5% glycerol. See example 6. Kennedy teaches the utilization of EXOSURF for neonatal RDS and the dosage. Kennedy discloses that the application of EXOSURF, which contains other ingredients besides tyloxapol, was noted with side effects. See column 6, lines 3-41. Kennedy teaches the utilization of the tyloxapol

alone for conventional applications in the art but without the side effects of the other ingredients such as DPPC. Kennedy teaches the without the use of hypertonic agents or other active ingredients (DPPC), one can derive higher concentration of tyloxapol for less frequent and more rapid administration. Further this increases tyloxapol's benefits such as its reduced toxicity and enhanced half-life, while avoiding the side effects associated with other ingredients. See column 8, lines 29-42.

Examiner admits that Kennedy does not specify all the instant respiratory diseases, however, Examiner submits that Meyer teaches the application of a lung surfactant to reduce sleep apnea wherein the lung surfactant is EXOSURF. See column 4, lines 50-54 and that Meyer teaches the use of several devices to deliver nasal compositions with instant attachments. For instance a tapered extension nozzle for direct application to the pharyngeal region. See column 5, lines 42-50.

Examiner maintains that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kennedy et al and Meyer et al and utilize Kennedy's composition to treat sleep apnea and SIDS. One would be motivated to do so since Meyer teaches EXOSURF to treat sleep apnea and since SIDS is the cessation of respiration while an infant sleeps, one would expect that a composition that treats apnea will treat SIDS because SIDS falls into the category of sleep apnea.

Furthermore, Examiner continues, Kennedy teaches the conventional use of EXOSURF for neonatal RDS and SIDS is a form of neonatal respiratory distress. Lastly, one would have expectation of similar results with the interchangeable use of EXOSURF and Kennedy's tyloxapol formulation since Kennedy teaches that the composition containing tyloxapol only can be applied in the same manner as the prior art formulation

(EXOSURF) without the side effects. Therefore, Kennedy teaches the application of his formulation for all prior applications of EXOSURF.

Lastly, it is deemed obvious to one of ordinary skill in the art to use the appropriate dosage form and device to administer the composition. One would be motivated to do so based on the area to be treated.

Examiner rejects claims 13 and 16, 28-29 and 35 under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al (5,849,263) by itself or in view of Meyer et l (5,958,902).

Kennedy et al disclose a pharmaceutical composition containing 0.25%-5% tyloxapol and a carrier medium (distilled water/saline) for the treatment of respiratory diseases and distress. See column 7, lines 43-45 and column 11, lines 19-21. Kennedy discloses the ALEVAIRE formulation containing 0.125% tyloxapol, 2% NaHCO3, and 5% glycerol. See example 6. Kennedy teaches the utilization of EXOSURF for neonatal RDS and the dosage. Kennedy discloses that the application of EXOSURF, which contains other ingredients besides tyloxapol, was noted with side effects. See column 6, lines 3-41. Kennedy teaches the utilization of the tyloxapol alone for conventional applications in the art but without the side effects of the other ingredients such as DPPC. Kennedy teaches the without the use of hypertonic agents or other active ingredients (DPPC), one can derive higher concentration of tyloxapol for less and frequent and more rapid administration. Further this increases tyloxapol's benefits such as its reduced toxicity and enhanced half-life, while avoiding the side effects associated with other ingredients. See column 8, lines 29-42.

Kennedy does not specify all the instant respiratory diseases. Meyer teaches the application of a lung surfactant to the reduce sleep apnea.

The lung surfactant is EXOSURF. See column 4, lines 50-54. Meyer teaches the use of several devices to deliver nasal compositions with instant attachments. For instance a tapered extension nozzle for direct application to the pharyngeal region. See column 5, lines 42-50.

Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Kennedy et al and Meyer et al and utilize Kennedy's composition to treat sleep apnea and SIDS. One would be motivated to do so since Meyer teaches EXOSURF to treat sleep apnea and since SIDS is the cessation of respiration while an infant sleeps, one would expect that a composition that treats apnea will treat SIDS because SIDS falls into the category of sleep apnea.

Furthermore, Kennedy teaches the conventional use of EXOSURF for neonatal RDS and SIDS is a form of neonatal respiratory distress. Lastly, one would have expectation of similar results with the interchangeable use of EXOSURF and Kennedy's tyloxapol formulation since Kennedy teaches that the composition containing tyloxapol only can be applied in the same manner as the prior art formulation (EXOSURF) without the side effects. Therefore, Kennedy teaches the application of his formulation for all prior applications of EXOSURF.

Lastly, it is deemed obvious to one of ordinary skill in the art to use the appropriate dosage form and device to administer the composition. One would be motivated to do so based on the area to be treated.

Applicant disagrees. Claim 35 is canceled.

Reference Kennedy was already discussed above and it was shown that it neither anticipates or make the current invention obvious.

Examiner argues that Meyer teaches the application of a lung

surfactant to reduce sleep apnea where the lung surfactant is EXOSURF and that Meyer teaches the use of several devices to deliver nasal composition with instant attachments.

Mainly, however, Examiner argues that it would have been obvious to one of ordinary skill to combine the teaching of Kennedy and Meyer to treat sleep apnea and SIDS.

Again, Applicant respectfully disagrees. Kennedy's formulation is specifically devoid of any other compound than tyloxapol dissolved in saline. Meyer teaches lung surfactant formulation which among other is suitable for use in infants. The Meyer formulation EXOSURF is a synthetic surfactant composition containing multiplicity of phospholipids in combination with tyloxapol.

EXOSURF is shown to contain a small amount (1 mg/ml) of tyloxapol in combination with other phospholipids. EXOSURT contains dipalmitoylphosphatidylcholine (13.5 mg/ml), cetyl alcohol (1.5 mg/ml, tyloxapol (1 mg/ml) dissolved in 0.1N NaCl. PDR reference providing the exact formulation of EXOSURF was submitted to the Examiner with the Office action dated July 22, 2002.

Again, the EXOSURF is not the same composition as the current composition, it is not used for the same purposes, as it is used as a lung surfactant, it contains other surfactants in much higher amounts, it does not contain any $NaHCO_3$ or glycerol and is administered into the lungs of infants, not to the nasopharyngeal cavity. Kennedy does not contain $NaHCO_3$ or glycerol, thus a combination of Kennedy with Meyer could not possibly derive the current invention. Just the fact that some other formulation may treat similar condition does not make the current method for treatment of SIDS or sleep apnea obvious.

It is respectfully submitted that tyloxapol in a current composition was never before shown to be useful for treatment of

SIDS or sleep apnea and other indicated conditions. Rejection is overcome. It is respectfully requested that Examiner withdraw her rejections and let this application pass to issue.

SUMMARY

In summary Applicant amended claims to overcome rejections under 35 USC 112, first paragraph, and provide arguments showing that the anticipation and obviousness rejections are not proper. With this amendment, Applicant believes that all claims are in conditions for immediate allowance. Notice of allowance is respectfully solicited.

Respectfully submitted,

Date: December 29, 2003

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